A Cost Benefit Analysis of More Efficient Vehicles

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Announcement to freeze light truck C.A.F.É. standards at 20.7mpg for 2004

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NHTSA must inform Robert Harless of its reception and filing of this document

The cost of improving the mileage of a relatively low mileage vehicle (American light trucks) would bring about many cost savings to the non-transportation sector of the economy, it would have many, very strong echo effects, or a multiplier if you like. Americans drive the most inefficient vehicles in the world. "Light Trucks" were once mostly registered as commercial vehicles. In 1975, when the Ford Administration wisely imposed the CAFÉ regulations, Congress didn't want to restrict commerce, as in "commercial" vehicles. The irony is that commercial vehicle users have the highest incentive for economy and the lowest demand for un-needed, excess power or "high performance," which costs such a great deal in fuel efficiency. The commercial user can squeeze a higher living standard from fuel thrift, and spend the savings on the non-transportation sector of the economy.

But simply reducing the amount of oil used by our economy, whether in commerce or for private, non-commercial use should be the #1 goal of US policy. This is because securing the commodity of oil is essential to run our economic machine and our military, which defends the *whole* of the U.S. Congress has violated the most basic notions of rationality in giving special dispensation to the physiognomy of the "light truck" chassis over and above the "car" chassis. Congress has made a fetish of certain terms like "commerce" or "truck." The current policy is itself based on a false dichotomy of "trucks" vs. "cars." The two are used in exactly the same way, but "trucks" which are designed for passenger use, and have no "commercial" utility whatsoever, get a statutory advantage. For Congress to ignore the absurdity and irrationality of its own statutes is to violate its sacred charter from our Constitution: "to form a more perfect union." That is a union ruled by transparent, rational statutes, not a different rule for each day of the week, or draconian laws for the weak and indulgent laws for the powerful.

A 15mpg vehicle cost $2,000 to run 20,000 miles per year with $1.50 gallon gas. $20,000 over 10 years is the total fuel cost. This is probably the minimum life of the vehicle, even if the original owner trades or sells it. If I double the mileage with a 30mpg hybrid car, I save $10,000 over ten years, a *gross* savings of $3,000, given a rather high $7,000 hybrid premium. This would be for today's less developed hybrids, where the gas engine provides the majority of the power. Of course a $1,000 per year, ten years from now is not as valuable as $1,000 today. The following table expresses the value of non-inflation "real" dollars.

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Year			Undiscounted	Net Benefit After Discounting			
	Cost	Benefit	Net Benefit	Discount rate:			
				0	0.03	0.06	0.09
0	-7,000	1000	-6,000	-6,000	6,000	-6000	-6000
1		1000	1,000	1,000	971	943	917
2		1000	1,000	1,000	943	890	842
3		1000	1,000	1,000	915	840	772
4		1000	1,000	1,000	888	792	708
5		1000	1,000	1,000	863	747	650
6		1000	1,000	1,000	837	705	596
7		1000	1,000	1,000	813	665	547
8		1000	1,000	1,000	789	627	502
9		1000	1,000	1,000	766	592	460
Sums equal							
Net Present Value			3,000	3,000	1,786	802	-5

The problem we pose really comes down to the question: Should I spend $7,000 now to obtain a $1,000 per year for this and the next nine years. The answer to that question depends on the *discount rate* you use to normalize dollars in the future versus dollars today. That is, we need to know the net present value of this flow. The formula applied to the net benefits for any given year = (net benefit)/(1+discount rate)^{year}.

Now the question becomes what discount rate is relevant to this problem? Remember that we are using real dollars, so we should use a *real* interest rate (no inflation premium included). I give several different values above; note that the net present value is positive (the investment is beneficial) for any discount rate below 9%. The 3% discount rate is a good approximation to the real interest rate (after inflation) a consumer could obtain on a "safe" asset for saving. But the amount they would have to pay for a loan would be higher. There is controversy about the correct discount rate to use. But it should definitely be lower than 9%.

However, it's very important in a cost benefit analysis to factor in all variables:

If I keep the car longer than ten years, I continue to stretch my monthly gasoline bill twice as far as I would have, all things being equal. Cars are becoming much more reliable and longer lasting, so the vehicle might have another five or even ten years on the market, given the better reliability of today's components and anti corrosion techniques, we might get half of them to operate for twenty years. Adding ten years of halved fuel costs over a gas only vehicle built this year, which would last about as long as a hybrid.

At the end of 10 years *I still have the hybrid drive*, while the cost of 7,000 dollars worth of gas has only been burned away. The car could be expected to bring more money on the used market. Given the high value of their component cores, makers would have an incentive to offer much higher trade ins for hybrids, because the electric motor is extremely profitable to recycle and refurbish given the high cost of its semi precious raw materials. This value is NOT taken into account in the net present value analysis table.

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If I want to replace the hybrid drive myself, I would get at least the ratio of the trade in value of a starter or alternator, a smaller version of the electric hybrid motor. Up to 50% could be expected as trade in for a "rebuild" hybrid drive unit, a higher rate than an engine block core, whose reciprocating parts are more wear prone and are composed of less precious metal.

I get double the driving range and half the exhaust particulate. Consider the health care cost savings of half the incidence of respiratory illness. As we become more and more urbanized, this problem will get worse. A fleet of US cars that average 30mpg rather than 15mpg would cut in half auto exhaust gases, which cause smog and "ozone action" alerts where citizens are informed not to breath too deeply or exert themselves.

We would gradually decrease the amount of climate changing gas, a little at first, and then with hybrid popularization, we could expect half the carbon dioxide. I'm sure few people will disagree with the overwhelming scientific evidence of global warming, and a concomitant increase in the amount of CO2 gas in the atmosphere, a gas produced by burning fuel. The most expensive thing our civilization could look forward to is an epic scale remedy for rising sea levels in order to preserve giant coastal population centers. Even a ten percent "insurance policy" would be a small price to pay to avoid perhaps trillions of spending for remediation, but even if we were to put aside 333 billion, or even three times that amount, some giant dams and dykes would probably never work anyway. The point here is that even if the hybrid cost benefit ratio to the consumer is about 1:1, the whole of U.S. society is at a lower risk of climate catastrophe, and we could lower oil consumption as sort of Insurance Policy, to reduce greenhouse gases and their attendant risk of global warming. We'd love to spend 33 billion to even marginally decrease our chances of an epic calamity. This is about the amount of G.W. Bush's taxpayer giveaways to the oil industry.

The extra value of the engine parts and core, and higher resale value over a regular car, would represent the residual "added value" of the design labor hours, assembly labor hours, capital costs and materials that are "left over" after ten years of service. After ten years, even at a cost ratio of 1:1, you would still have the extra value of the hybrid drive . Simply refining oil imports domestically would add much less value to the commodity oil, than designing and building $7,000 hybrid drives adds to the semi precious metals of a DC motor. The point here is that the value of the commodity oil has a much smaller percentage of "added value" in the labor and resources needed to refine it into fuel and transport it to end users, i.e. "black gold" has most of its value in the oil itself and not the labor and capital resources needed to bring it from the ground to your gas tank.

The best way to lower the price of oil would be to reduce American demand, which our textbooks tell us will lower the price. Since we use over 20% of the world supply, a substantial decrease in demand from the world's *biggest* user would have the *biggest* effect on the commodity price. Only the most efficient producers and refiners would stay in the market, freeing the hands of inefficient producers to provide other products with greater demand than oil, this would have a net increase in the productivity of the entire world, not just the U.S. economy.

A lower oil price would help non-transportation sector of the economy just as much. Products made of oil would be cheaper, and the oil needed to transport products would be

cheaper and compose a smaller percentage of productions costs, yet the output remains the same. Adopting hybrid technology to commercial vehicles or other industrial applications would decrease the ratio of GDP to oil used in our economy, a ratio that is currently the highest in the world.

Europeans already have tiny cars, like the VW Polo which can get as much mileage as small hybrids, but, as GM reminded us at last year's auto shows, the vehicles with larger gas bills will get the most savings from hybrid technology. If American hybrid cars lead the way in technology, we could enjoy higher auto exports, especially with expanded free trade to the European Union and through NAFTA. It would allow Europeans a much larger or powerful vehicle that still meets the EU's high standards for consumption and emissions, and this type of American luxury vehicle might be a phenomenon in coming decades

Some have theorized that European and Japanese cars became so much better because their best minds went into auto design after WWII, rather than working for the government or its contractors as designers of military engineering marvels like our fighter jets or computer weapons systems, because the two didn't need to provide for their own defense. Just as in WWII, when the government harnessed talent to create the first nuclear weapon, here too, the military objective of securing plenty of oil, which is needed to conduct war, would be simplified if the price for the commodity were lower. Procuring oil would be much cheaper, simpler and above all, *safer*, if U.S. demand for oil underwent a net decrease.

Rouge states that happen to have oil reserves would have much less tactical and strategic leverage over America, or any other state for that matter, if all of the worlds oil needs could come only from stable and legitimate states. The myriad problems and high marginal cost of building and *securing* oil pipelines across chaotic nations like Somalia, Afghanistan, Nigeria etc, disappear if legitimate, stable, reliable states like Venezuela, Mexico, Russia or Saudi Arabia can provide all of our needs. Engineering advanced fuel saving vehicles would be a way to achieve the end of a much safer, orderly world for the United States and its allies. This would require that we redirect some military engineering brainpower to the auto industry, helping US autos to better compete with their Japanese and German rivals, who currently devote much less GDP to defense spending.

Increased auto exports would give a massive boost to our balance of payments. We could import raw materials and export vehicles (with a higher added value than gas only vehicles) worth many orders of magnitude more than the value of their raw material. Since the vehicles are more valuable, our GDP could expect a boost simply from the more expensive vehicles produced, whether we exported them or not, and a further increase in GDP if U.S. auto exports increase.

The goal of Congress and NHTSA should not necessarily be to boost auto exports, or the construction of hybrid vehicles, despite the net economic gain to the auto industry. However the goal of reducing oil demand is the highest priority for a better economy and more importantly, a safer world order that rewards orderly, legitimate oil producing states, not those that threaten American lives and resources or strategic interests. Congress should provide incentives to buyers of high mileage vehicles, no matter what

engineering marvels make them efficient. Hybrid vehicles have a higher value than a gas only vehicle that gets the same mileage, due to greater size performance, luxury or four wheel drive capability that hybrid drive makes possible while maintaining economy car mileage.

SOLUTION #1

Redirecting U.S. treasury money in a way that would benefit the whole of the American populace, above and beyond the mere dollar amount spent, must be considered here. An undeniable cost that must be factored into the cost of our transportation system in America is the cost in taxpayer dollars. The Partnership for a New Generation of Vehicles (PNGV) program, meant to develop hybrid vehicle technology, begun in '93 and just ended by G.W. Bush in January '02, costs more than one billion dollars. 1.2 billion equates to over 150,000,000 a year for eight years would give you 50,000 **US efficient auto bonds** worth $3,000 to use toward the purchase of *any* new vehicle with a 30mpg EPA city rating. In return the buyer must surrender his "gas guzzler" to the dealer who may sell it for scrap metal, or sell it to a facility that would disassemble and salvage its useable parts. This money would be compensation for the administration of the program by the dealer, and the proceeds would be taxed at a percentage, to encourage the dealer to get top dollar. The tax money would pay for government audits of the dealer's administration of the program, to insure the older cars were not simply re-sold as used cars. In this scenario, only those with "clunkers" worth less than $3,000 in private sale would have an incentive to participate, but it could encourage those who have only bought used cars to enter the new car market.

8 years x 50,000 = 400,000 x ($10,000 savings over ten years) = 4,000,000,000

That is 4 billion dollars, non-inflation adjusted. In eighteen years, all of the cost of the bonds is more than recouped in saved gasoline if all the cars were 15mpg gas vehicles switched for 30mpg gas cars and driven 20,000 miles per year.

If half of the US efficient auto bond beneficiaries would have bought a new car despite the incentive, in ten years, 200,000 people will have an extra $3,000 dollars *the same year they buy the new car* that they would have spent on a new vehicle, *plus* $10,000 (non-inflation adjusted) savings in gasoline over the years. This assumes the buyer would use the bond to buy a vehicle of the same expense, but higher mileage, than the vehicle they would have purchased with out the bond. Over ten years I get $13,000 in non-inflation adjusted dollars to spend on non-transportation sector of the economy or to invest in the bond or stock market as wealth, rather than if I had a 15mpg car.

The other half of owners, would probably be the bottom half of income earners of this set of bond beneficiaries. These are people with so little wealth, that the $3,000 or1/4 down payment on an economy car like a Dodge Neon ($12,000) would yield a manageable monthly payment, and get them out of a clunker, which is likely to be older, more polluting etc. To be fair, the program should only apply to households with one or two vehicles, and you must have owned the "clunker" for a year to be able to surrender it to the dealer. Households would only be able to receive one auto bond for life, in order to let as many households as possible participate, given the limited number use per year.

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This program pays back the investment of 1.2 billion quickly with a 2.8 billion net gain in eighteen years, but the dent made in our total oil consumption is very small. So the "echo" effect of lower oil consumption and concomitant, lower oil prices, is low. While there is a sufficient incentive to buy a low cost, high mileage vehicle, the $3,000 is not a high enough incentive to buy a hybrid vehicle, since the bond is less than half the hybrid's extra cost of $7,000.

SOLUTION 2:

A much more successful **U.S. efficient auto bond** program would redirect tax money back to consumers that would have been used for the 35 billion in oil incentives in the Bush oil industry subsidy bill that is now coming before congress. We could mete out the money over 10 years, at 3.5 billion dollars a year. For 10 years we could issue 700,000 bonds/year worth $5,000 to those who replaced their car with any car that delivered double the fleet average city EPA rating of cars sold in the U.S. This would have more of an appeal to some middle-income earners, who could expect a maximum of $4000 in a private sale or a $2,500 trade in from the dealer.

10 years x 700,000 = 7,000,000 buyers x ($10,000 net gain) = 70,000,000,000 70 billion. We have returned a 100% profit on our government investment of 35 billion in 20 years.

This is money that would have been spent on fuel that can now boost other sectors of the economy. This would be only by going from 15mpg city rating to 30mpg gas only cars for all of the bond beneficiaries. I don't attempt to calculate how much effect this reduced demand would have on oil prices. The shortest path would simply be to mandate 30mpg city standard for all new vehicles, but the auto bonds would help buyers and makers with the transition to much more efficiency.

If a buyer chose a hybrid vehicle that met the 30mpg criterion, it might be more expensive, but the bond money would allow him to justify the extra expense of larger hybrid vehicle, vs. a small gas only car, a difference of only $2,000. This would appeal to middle class buyers who want to take advantage of the US efficient auto bond program but want the pecuniary decency and/or the size of a mid to large size Dodge Caravan passenger van or Durango SUV which would only qualify as 30mpg cars with the addition of hybrid drive. If all buyers chose hybrids they would 'only' save a $21 billion in 45 years, given a $3,000 gross savings over ten years. This also assumes the vehicle the middle class person chose was the same one he would have chose without the bond, but with the $7,000 hybrid vehicle premium.

The more generous 35 billion allotted by Bush would enable less restrictive rules. 700,000 bonds a year might allow households to get more than one bond in a lifetime or have more than two vehicles. This would allow middle or upper income households to realize a benefit. Even first time car buyers, not just those with a clunker to trade in, might be granted this efficient auto bond. This would surely be a huge boon to the auto industry, but the rest of the economy as well, since some 52 billion dollars might be reinvested into the non-transportation sector of our economy due to a gross fuel savings of 35 billion and 17.5 billion in automobile costs that would be absorbed by the bonds, assuming half of the recipients would have bought a new car of the same value anyway.

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This program allows those without the desire to impress their neighbors, to purchase a small gas only vehicle, while middle class buyers can "keep up with the Jones" by purchasing a larger hybrid vehicle, which qualifies for the efficiency bond, but at a greater expense. The auto sector of the economy would grow due to a greater amount of parts needed per vehicle, but they would be worth more on the world stage, offering the "American Dream" of Cadillac sized car, at greater expense, but with the average economy of a European car. We would inevitably make the commodity cheaper by lowering our demand. Shedding less American blood is a value in itself, something we can't calculate. Our strategic interests, and our very survival, depend upon decreasing the strategic and economic value of the commodity oil; it is that for which and with which we wage war. To provide for the common defense" is a Constitutionally delineated public interest Congress is sworn to uphold.

More Hybrid cars would tend to increase the average price of a vehicle, and therefore increase the percentage of GDP dominated by transportation costs. This would tend to favor automakers by giving them a bigger bite of our economic pie, although makers can argue they are providing a vastly superior vehicle for the extra money. *Favoring automakers at the expense of all non-transportation sectors of the economy should not be the goal to which Congress and its regulatory arm of enforcement, the NHTSA, should necessarily be devoted*. U.S. auto industry lobbying against CAFÉ increases was predicated on the notion that large light trucks were its exclusive, privileged domain, but foreign makers like Toyota now make large light trucks on the scale of the F-150 Ford. Congress putting automakers in charge of their own regulatory scheme, CAFÉ, has only had the unintended consequence of decreasing the fleet average efficiency of US new cars. This arrangement only increases the economic bite of pie for the oil industry, which is dominated by imports and offers little "added value" from design or labor hours.

The role of the Congress, through NHTSA should definitely not be to "pick winners" by favoring the physiognomy of the "truck" chassis layout over the "car" chassis layout. The entire notion is completely absurd since the vehicles are used for exactly the same purpose. Even the word "car" is a peculiar Americanism, where "auto" is used around the world in many languages. A "truck" is a "lorry" in the British idiom, but it would be absurd to call a Ford Explorer a "lorry," which implies a load carrying contrivance of commerce. Congress and NHTSA are perilously close to appearing absurd to Americans and the world. The truth is the regulation has shaped our peculiar American taste for sport utility vehicles for the past twenty-five years. As early as 1976, truck divisions were capitalizing on the special dispensation given "light trucks" by the CAFÉ regime (see attached supplemental article **"BigTime."**)

The role of Congress should *not* be to grant advantage to any particular auto/cultural aesthetic. The role of Congress should not be to pick and choose one industry over another. Congress has degenerated into a more archaic archetype of rule than that pictured by the founders. *Bestowing special favor on the powerful is the oldest trick in the book of the ruling class*, a trick of which our Founding Fathers were only too aware. Congress primary duty is to firmly reign in any individual company or industry in general that violates the public interest, i.e. the interest of all U.S. citizens taken as a whole. The role of Congress is to create statutes to shape a more *rational* and orderly society ("a more perfect union"). When Congress offers statutory favor or redirects the taxes

collected from the whole to only the most powerful industries, Congress violates the "natural law" of the invisible hand of the marketplace. This unwise desire by Congress to "pick winners" restricts the growth and vigor of the auto industry and non-transportation industries.

THE FOLLOWING IS AN EXERPTED CHAPTER called "BIGTIME" from Robert Harless' upcoming book "Horsepower War" and it details how Manufacturers have taken advantage of the false statutory dichotomy of "car" vs. "truck." Within a year of the special dispensation given to "trucks" US makers were already crafting trucks intended for personal transportation, which emitted greater pollution and had worse mileage than "cars."

Back in the late seventies and early eighties, we looked back at the fifties and sixties as being a great time for gas guzzling innocence regarding the many hazards of cars. Besides macro pollution, there are those dreaded accidents and of course, the suburban sprawl. This late seventies period was full of dire predictions about the microscopic "world" cars we would all be driving now but the truth is many orders of magnitude worse than they forecasted when Lee Majors ruled the stuntman's world in "Fall Guy." Instead of lack of oil, we have too much sun and carbon dioxide and too much ozone near the ground and not enough way up in the sky. Yet our buying habits are 180 degrees from what they were when K cars bustled and we winced to news of Reagan's assassination.

I must say, as a 1980-1981subscriber to **Peterson's Four Wheel and Off Road**, writers of the day saw the handwriting on the wall for the giant F-150s and K-10s of the day. The big ol' American truck was in a process of "downsizing" and we were witness to a parade of low-geared six cylinder models, which actually had been the norm up until about the late sixties, when the first so called "big block" V-8's (actually borrowed from cars of the day) got planted in a few "Trailer Towing" RV option packages. While the cheapest cars got V-8s in the fifties, Chevy pickups stuck with the inline six by a factor of six to one by 1960. In the fifties, cars were actually wider and heavier than trucks**.**

Although the press, (Namely National Public Radio) sometimes claims the story starts in the '90s, the '70s were really the beginning of the what makes the "SUV" so popular today, that is, the addition of plush, interiors and accessories like power windows in the '77 GM trucks, combined with the sexy "sport" cues like fat, white letter tires, "mag" wheels and special striping and badges and trim. An echo of the power of the old *supercars* was there in the form of the healthy to large size V-8 engine, but now it was harnessed as a means to "go anywhere." When Mechanix Illustrated's Tom McCahill tested a '73 GMC Jimmy, he noted that there was almost too much power, or at least a bit much for off roading, most of which requires extremely judicious feathering of the throttle rather than ham fisted go-pedal belting. Tom owned a '66 Wagoneer, which he used for bird hunting. It only had a six cylinder but was well suited for Tom's duck hunting trips; perhaps the only handicap was less high-speed cruising ability. Tom knew that there is a lot to lose there perched on some rocks on the side of a mountain, and

speeding uphill is the last thing you could do in "Four Low" that is, where a two speed transfer case is engaged in it's lower ratio.

The first G.P.s or Jeeps of World War II, which we can definitely call the first SUV, had very little raw horsepower. Forty or so horses will do if you have a low axle ratio. Of course, this limits top speed to about 60mph. Then again, a Top Fuel dragster is incapable of negotiating a steep rocky incline, because all the horsepower in the world won't help you if your axle isn't low geared. All the SUV ads today brag mostly of power and there is always our heroic, glorified window delivery wagon, charging through the snow mud or water at top speed, bouncing and jumping the thing enough to destroy it in a month or two if the pace continued. This is the last vestige of the supercar's original anti-social nature, what Motor Trend's Julian Schmidt described but here, it happens away from others, in our own private primeval forest of erotic gratification. This valence began with the *supercar* but survived even the tape stripe musclecar's demise. We have invested all erotic energy into these SUVs. The trend exploded in the seventies when the "sport" aspect of S.U.V. was more in the foreground. Dodge had a plethora of "Macho Power Wagons" (I'm not kidding) tape stripe graphic 4X4's which borrowed heavily from the genre of seventies supercars, what with their bucket seats and white letter tires. They sold you a pre-packaged "tough" image with the stripes and eight spoke styled steel 15" wheels to replace the Magnum 500 14 inch wheels of the sixties *supercar*.

The idea of on extra powerful engine in an upscale "identity" truck was perfected in the '78 Dodge "Lil' Red Express Truck" The Express part of the package came via the engine, dubbed "360 Express" on the chromed air cleaner. This baby was a full tilt, 15.7 second e.t. street rod. The prototype ran consistent 14.7 e.t.s at 93mph, it had special W-2 heads, a 4160 Holley carb and Holley medium rise intake manifold. The stock version retained the free breathing, dual snorkel, ram induction, similar to Olds under bumper system in the sixties. It was still quite fast, only a second slower and 5mph slower in the e.t.. It was a radical statement, with wood inlayed tailgate and requisite giant decal on each door. The sticker linked the supertruck to the pickup's commercial past since it looked like an excavation company logo, screaming in old west style letters the name that is its instant co-opted hot rod identity. The Dodge Boys even used smaller front tires than rear ones, ala the '70 Plymouth Cuda "AAR" 340 six pack, and most hot rods for that matter.

The metaphor of co-opted commerce is not so strained, in fact Dodge's wit was razor sharp. It was the pickup's alleged "commercial" use, which stayed Congress' hand from the smog regulations it dealt to cars. The lack of regulation accounted for the pickup's 30 horse advantage over the 195hp "Police" motor used in Dodge Monacos. The sedans wore "lean burn" variable spark advance as well as exhaust choking catalytic converters, where the 225 hp Lil Red (Express) Truck breathed out of super low restriction, dual semi-truck style "smokestacks" like it was the pre-smog year of 1967. The cam timing was that of the "police" 360 inch V-8 used in the '79 Chrysler 300. It used 252 degrees of exhaust and intake and had only 33 degrees of overlap, combined with '68 340 V-8 valve springs.

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In a Motor Trend test where the truck was driven from LA into Washington state, testers could easily reach the century mark if they just held the throttle a little longer during passing, although its stout 3.55:1 axle limited speed to 115mph or so. Hot Rod thought the 13mph fuel consumption was more than acceptable, after all, the low back pressure smokestacks aid economy since even idling and low speed driving require less energy to push the burned exhaust particulate out of the cylinders. For comparison, a 400 inch small block '77 Chevy Blazer tested by SUPER CHEVY managed little more than 10mpg. In the same issue a 400 inch pickup got 10mpg in both highway cruising *and* off road motoring. Motor Trend decried the fuel swilling, which is particularly evident on a very long trip.

'78 really was a red letter year for the trucks and jeeps. "Pickup Van and 4wd" magazine was joined by the new "Petersen's Four Wheel and Off Road." That year could even be said to be a sort of big bang, but it was 9 years after the first Blazer and 14 since the Wagoneer. I remember it as being the first year "LRP" conversions started selling tricked out Blazers and four wheel drive, short bed, Chevy and GMC pickups. They were sold through the local dealerships and featured aftermarket "Jackman" white painted spoke wheels and the white letter B.F. Goodrich tires. "The Warlock" was one of Dodge's "Adult Toys" for '78. It was the four wheel drive version of the Lil Red Express Truck, but without the trick engine and smokestacks. It instead featured the black paint and gold striping that garnered such gilded sales for that Burt Reynolds Trans Am of "Smokey and the Bandit."

However, despite Mopar's "Adult Toys" and Ford's "Free Wheeling" series of tape stripe graphic, white spoke wheeled "attitude" trucks, The '76 GMC "Gentleman Jim" started it all, and is the most closely analogous to the GTO's prime first place. It was a longed, blue and silver painted luxury GMC pickup sold as a limited edition, striped and sport wheeled identity machine. It used the slotted rally wheels with trim rings with a splash of color keyed wheel. There was another one in black and gold, called "Beau James" and both had special, large, color badges to signify an instant loquacious "personality" just like the Plymouth Roadrunner, although only the old reliable 350 four barrel V-8 was used in them. Still, they were said to handle and accelerate well, and it was twenty four years ahead of the Lincoln "Blackwood" pickup. Here again, GM was first to co-opt the customized hot rod trucks that appeared in the early seventies, again, as with it had with cars of the sixties. And it was already taking advantage of the CAFÉ exception by promoting a "Personal" truck, not meant for work.

It was in '77 long lead press previews at GM proving grounds that GM promoted its 454 inch V-8 half ton short bed truck as an alternate factory hot rod. The performance press was invited to a screening of all white trucks with ubiquitous eight spoke white steel wheels and loading rails on the sides of the truck bed. The event was staged complete with Chrondeck timing lights and a "nearly" 1/4 mile drag strip. Bone stock, but with modified automatic transmissions and open headers, the trucks ran in the twelves. Of course the stock model's prime benefit flowed from an old fashioned, free breathing dual exhaust. Motor Trend tested a Chevy Sport '76 C-10 short bed step side with the 454 in

its "Flat Out Fastest" top speed comparison of American cars. It bested the Mustang II with a heady 117mph top end, amazing considering the vehicles vast frontal area.

In 2002, pickups get the same mileage as the seventies versions but have nearly twice as much net horsepower. The seventies big pickups, with a 350 inch engine, could do 0-60 mph in about 12 seconds. Typical 2000 models do it in 8 or 9 seconds, which is only about two seconds slower than the *supercars* of the sixties could, and about the same as the supertrucks of the seventies and eighties. What made the seventies the real birthing ground of the S.U.V. was the decision by the E.PA. to designate trucks as commercial vehicles, although by 1978, trucks had come to compose one third of GM's production and the ratio of private to commercial registrations of trucks was flipping over. The Chevy Blazer managed to rank in orders of magnitude to the ubiquitous Pontiac Firebird and Chevy Monte Carlo. Now we are brought to a phase where "light trucks" make *over* half the market. And the Camaro faces extinction, due to lack of interest, even as it is the fastest, best handling Camaro ever made, by long strides, it's sexual thunder has been co-opted by what was once the Bell Telephone company's Four wheel drive crew cab Ford pickup, now sells as a 45,000 dollar, fat tired and mag wheeled dream machine. Mitsubishi will tell you the SUV is the macho opposite of the "minivan" even though pickups and vans were once considered boring equals when the *supercar* era reigned.

Yesterday we threw away plastic, drove cars into the outback and fished, whereas now we ride mountain bikes in the city, drive S.U.V.s on the freeway and throw away plastic. Way back then (only forty years ago) there was much more open, wild space to explore. This space is now devoted to the property of suburban achievers driving today's S.U.V.s. These people use them to go to work and make work calls whereas yesterday one got a "Sport-Utility" (the "Vehicle" was implied back then) as a weekend safari wagon for intrepid "sportsmen." The roads you could drive on, like old logging roads, are for the most part, closed now. The difference is that regular cars were once driven on the logging roads, when there were essentially no four wheel drive pickups made outside of the Dodge Power Wagon and Jeep Pickup, which sold in tiny numbers. Now the average good S.U.V. lets you go in "full time" four wheel drive at the first sign of rain. The original role of the "sport utility" as a vehicle for leisure time "sportsmen" who hunt or fish or simply to explore the boondocks has been replaced by a completely different aesthetic. Today the SUV is a device not for leisure, but to guarantee the forward progress of one's career, to keep moving forward despite any and all of God's obstacles. The SUV is simply the new Cadillac type conformist status vehicle for mainstream suburbanites.

We didn't get to this complete affirmation of the off road lifestyle simply because of rugged individualism. Random, bureaucratic and statutory snafu's and bad politics explain our pickup plethora. Starting in the 1976 and all through the eighties, cars were forced to comply with strict fuel economy regulations while the gargantuan Chevy Suburbans thumbed their noses at the Yankee National Highway Traffic Administrator Joan Claybrook. Ralph Nader, the father of consumer activism was crushed when D.O.T. safety tests revealed that sheer weight was the best insurance against death in an accident. It turns out the best defense is a good offense, especially if your bumper is

above the other guy's; that way it's not a fair fight. Yet the right argues you can't consider these SUVs too big, but you should consider the vehicles sold in every other country in the world "too small." These are cars that are about twice as fuel efficient as our big SUVs.

The eighties American cars got great mileage just as oil extraction technology expanded and Mexico began drilling wells in earnest and America was "walking tall" simply by being the biggest buyer and thereby setting the price. The truth is that the CAFE (corporate average fuel economy) statute allowed our oil demand to grow slower which was our most brilliant military move ever, perhaps even better than building the "strategic" interstate highway in the first place.

Jimmy Carter wore a sweater and told us to turn down our thermostats as tactical response to OPEC nations. In fact, Carter sold his directive to conserve as a strategic military move. Now, in our global economy, where we needn't be so nationalistic, the fifties are back in an even sicker way. The Ford Excursion has debuted. It is a four door station wagon based on Ford's new "extra-large" pickup, the F-250. Some may remember the International Harvester Travelall that Walther Mathau drove in "Grumpier Old Men." This was a full size pickup based four door wagon, much bigger than International Harvester's jeep-sized "Scout" line. Still, the new Excursion outweighs it by nearly a *ton*. Even compared to the "Cowboy Cadillac" of the Chevy Suburban, which has been Texas' official car for a good twenty years, the Ford Excursion is on an entirely new plane of vast hugeness. But this is all part of a larger trend, not just Fords better ideas. The '99 Chevy truck axle is a good half-foot wider in track than the '73 to '87, and it's hard to get an engine under 270 horsepower over at Chevy, whereas the seventies V-8's had only about 170 ponies.

The 1994 Dodge Ram pickup started this madness. It was styled to look like a semi tractor trailer truck and could be had with a 488 cubic inch engine, again, bigger even than the sixties Dodge *supercar*s which only went up to 440 inches. When the Chrysler 440 V-8 debuted in the mid sixties, it was considered totally over the top. The giant 454 Chevy V-8 didn't even debut till 1970 when the sixties Horsepower War ended. The 1974 Arab oil embargo, and the CAFE regulations led to the cancellation of the 454 in the 1977 auto lineup. But, the absurd classification of light duty trucks as commercial vehicles means the 454 can still be had, over twenty years later, on the truck line. It has even grown in size to 502 inches. Ford will now let non-commercial buyers get the F-650 dual wheel cab chassis. These are the tow truck chassis, fifth wheel trailer towing mamas that used to be only rural school buses or ambulances or cable TV trucks but now are available to Joe Consumer. This is a blatant violation of the spirit of the law's bow to the "commercial" role of light trucks.

All manufacturers used smaller V-8s in big pickups in the early eighties pickups and Chevy and Ford brought out compact, V-6 engine models like the Chevy S-10 and Ford Ranger, but the efficiency trend ended soon after gas prices stabilized. Ford brought back the four barrel carb, 351 inch V-8 on 1984 half ton pickups. It is in the nineties that Ford and Chrysler really took the mantle of Sport Utility leadership. In 1999 the V-8 has again

become de-rigueur on so called “compact” Ford Explorer and Dodge Durango S.U.V.s. The apocalyptic mentality of the industry in the seventies and early eighties is over. But isn’t it ironic that we now buy a lot of bottled water and drive big trucks which give a smooth ride over our crumbling infrastructure as we wage war on small nations for the oil to feed them. Is this a “post apocalypse?”